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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/665,402 | 09/18/2003 | Michael Jacob | 14580/029001/FP1942 | 4393 |
| 20985 | 7590 | 10/19/2004 | EXAMINER | |
| FISH & RICHARDSON, PC 12390 EL CAMINO REAL SAN DIEGO, CA 92130-2081 | | | AUDUONG, GENE NGHIA | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2818 | |

DATE MAILED: 10/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/665,402

Applicant(s)

JACOB ET AL.

Examiner

Gene N Auduong

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 [19] is/are pending in the application.
4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-18 [19] is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Objections

1. Claim(s) 8 is objected to because of the following informalities: There are two claim 8 in current claimed invention. Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-18 [19] are rejected under 35 U.S.C. 102(b) as being anticipated by Imai et al. (U.S. Pat. No. 5,517,445).

Regarding claim 1, Imai et al. disclose a semiconductor memory (figure 6) comprising: a first capacitor (capacitor C11) for storing digital data connecting a cell plate line PL to a first bit-line BL through a first select transistor (switching transistor F11), the first select transistor F11 activated through a connection to a word line WL1; at least one reference capacitor CDa for providing a reference voltage to a reference bit-line; a sense amplifier (sense amp 42a) connected to the first and reference bit-lines for measuring a differential read signal on the first and reference bit-lines; and a charge path for reducing the differential read signal to determine the signal margin of the semiconductor memory (precharge line PCL for charging the bit-line to a predetermine voltage level; col. 9, lines 58+).

Regarding claim 2, Imai et al. disclose a semiconductor memory of claim 1, wherein, after a write of "0" data and read thereof, the first bit-line has a lower signal than the reference

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bit-line and the charge path increases the charge on the first bit-line (col. 10, lines 13+; col. 4, lines 5+).

Regarding claim 3, Imai et al. disclose a semiconductor memory of claim 1, wherein the reference bit-line has a lower signal than the first bit-line and the charge path increases the charge on the reference bit-line (col. 10, lines 13+).

Regarding claim 4, Imai et al. disclose a semiconductor memory of Claim 1, wherein the first bit-line has a higher signal than the reference bit-line and the charge path decreases the charge on the first bit-line (col. 10, lines 13+).

Regarding claim 5, Imai et al. disclose a semiconductor memory of claim 1, wherein the reference bit-line has a higher signal than the first bit-line and the charge path decreases the charge on the reference bit-line (col. 10, lines 13+).

Regarding claim 6, Imai et al. disclose a semiconductor memory of claim 1, wherein reference bit-line has a higher signal than the first bit-line and the charge path both decreases the charge on the reference bit-line and increases the charge on the reference bit-line (col. 10, lines 13+).

Regarding claim 7, Imai et al. disclose a semiconductor memory of claim 1, wherein reference bit-line has a lower signal than the first bit-line and the charge path both increases the charge on the reference bit-line and decreases the charge on the reference bit-line (col. 10, lines 13+).

Regarding claim 8, Imai et al. disclose a semiconductor memory of claim 1, wherein the charge transfer path includes a third transistor turned on and off to reduce the differential read signal (switching transistor FEa1 or FEa2).

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Regarding claim 9, Imai et al. disclose a semiconductor memory of claim 1, wherein the first and reference capacitors are ferroelectric capacitors or part of FeRAM (col. 8, lines 12+).

Double Patenting

4. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

5. Claims 1-18 [19] are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-4 and 9-13 of U.S. Patent No. 6,731,554. Although the conflicting claims are not identical, they are not patentably distinct from each other because they are claiming the same scope of the invention.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gene N Auduong whose telephone number is (571) 272-1773.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Nelms can be reached on (571) 272-1787. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

GA
October 4, 2004



Gene N Auduong
Primary Examiner
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